

Moving Towards a Long-Term Flexible Program for Managing the New York City Delaware Basin Reservoir Releases

Goals, Objectives and Constraints

Introduction

The New York City Delaware Basin reservoirs are operated in accordance with the 1954 Supreme Court Decree and Delaware River Basin Commission (DRBC) Docket No. D77-20 and its subsequent revisions. Elements of the current water management rules have evolved over more than 70 years, and the system has grown increasingly complex as it has been changed over time to better address human and ecological needs. The Decree Parties (New York City, New York State, New Jersey, Delaware and Pennsylvania) believe that a “long-term flexible program” that secures the benefits of flexibility and simplifies the current system while providing improved performance is highly desirable. In approving Docket D77-20 (Revision 7) the Decree Parties committed to engage in discussions, in cooperation with the Delaware River Master and DRBC, to develop such a long-term flexible program to manage releases from the New York City Delaware Basin reservoirs. This commitment arises from a desire to address several issues that have been identified in the past two decades. Among these are:

- Instream flow protection measures should be designed to address aquatic resource needs based upon scientific knowledge.
- As a result of highly effective water conservation measures coupled with significant reductions in industrial demands, increases in NYC’s demands and consequent reductions in the Excess Release Quantity have not as yet materialized.
- The drought experience of the 1960s changed our view of the yield of the reservoirs (this was largely addressed in the Good Faith Agreement).
- Existing operations limit flexibility in releases from the reservoirs.
- The Basinwide Plan, recently completed by DRBC, identifies a broad range of instream and withdrawal use issues whose solutions require greater flexibility in the use of upper basin mainstem flows.

Goal and Objectives

The goal of the program is to secure the benefits of increased flexibility, improve performance, and simplify programs for managing reservoir releases. In achieving this goal, the Decree Parties will pursue the following objectives:

- Reduce the number of drought days defined by mutually agreed upon drought rule curves (which may or may not be based on the current curves).
- Provide a sustainable source(s) of water to support instream uses in tailwaters below Neversink, Pepacton and Cannonsville Reservoirs, including through the Delaware River and Bay
- Consider flood mitigation below the NYC Delaware reservoirs.

Constraints

The Decree Parties have defined and agreed to the following set of basic management constraints that can be supported by demonstrable human or ecological needs:

- No additional negative impacts to aquifers, the oyster population, the City of Philadelphia or other lower basin uses, including instream uses, due to altered stream flow conditions
- No need for revision to NPDES permits based on altered design streamflow conditions
- NYC and NJ diversion rates as defined in the “Interstate Water Management Recommendations ...” (Good Faith Agreement) and codified in the DRBC Comprehensive Plan by DRBC Resolution No. 83-13 will be maintained and will not be increased without the construction or purchase of offsetting flow augmentation storage.
- No significant increases in drought frequency (days and occurrences) or storage drawdown. (In conforming to this constraint, it should be acknowledged that the stated objective is to actually *reduce* drought days.)
- No significant reduction in out-of-basin diversions